

September 2017 ~ Resource #330909

Medications Stored in the Refrigerator

(Information below comes from current U.S. and Canadian product labeling and is current as of date of publication)

Proper medication storage is important to ensure medication shelf life until the manufacturer expiration date and to reduce waste. Many meds are recommended to be stored at controlled-room temperature. However, several meds require storage in the refrigerator or freezer to ensure stability. See our toolbox, *Medication Storage: Maintaining the Cold Chain*, for helpful storage tips and other resources. Though most meds requiring storage at temperatures colder than room temperature should be stored in the refrigerator, expect to see a few meds require storage in the freezer. Some examples of **medications requiring frozen storage** conditions include: anthrax immune globulin (*Anthraxis* [U.S. only]), carmustine wafer (*Gliadel* [U.S. only]), cholera (live) vaccine (*Vaxchora*), dinoprostone vaginal insert (*Cervidil*), dinoprostone vaginal suppository (*Prostin E2* [U.S.]), varicella vaccine (*Varivax* [U.S.]; *Varivax III* [Canada] can be stored in the refrigerator or freezer), zoster vaccine (*Zostavax* [U.S.]; *Zostavax II* [Canada] can be stored in the refrigerator or freezer). Use the list below to help identify medications requiring refrigerator storage and become familiar with acceptable temperature excursions from recommended storage conditions.

Abbreviations: RT = room temperature

Abaloparatide (*Tymlos* [U.S.])

- Once open, may store at RT (68°F to 77°F [20°C to 25°C]) for up to 30 days.

Abatacept (*Orencia*)

Abciximab (*ReoPro*)

AbobotulinumtoxinA (*Dysport*)

Adalimumab (*Humira*)

- May store *Humira* pens or prefilled syringes at RT (up to 77°F [25°C]) for up to 14 days.

Albiglutide (*Tanzeum* [U.S.], *Eperzan* [Canada])

- May store at RT (up to 86°F [30°C]) for up to 4 weeks.

Alirocumab (*Praluent*)

- May store at RT (up to 77°F [25°C]) for up to 30 days (U.S. labeling).

Ado-trastuzumab emtansine (*Kadcyla* [U.S.])

Aflibercept (*Eylea*)

- May store at RT (77°F [25°C]) for up to 24 hours (Canadian labeling).

Alglucosidase alfa (*Lumizyme* [U.S.];

Myozyme [Canada])

Alprostadil injection (*Caverject* 40 mcg, *Prostin VR*)

- May store *Caverject* 40 mcg at RT for up to 3 months (U.S. labeling).
- U.S. *Caverject* strengths 5 mcg, 10 mcg, and 20 mcg along with all Canadian strengths do not require refrigeration.
- *Caverject Impulse* (U.S.) does not require refrigeration.

Alprostadil suppositories (*Muse*)

- May store at RT (up to 86°F [30°C]) for up to 14 days.

Alteplase (*Cathflo Activase* [U.S.]; *Cathflo* [Canada])

Amphotericin B (*Abelcet*, *Fungizone*)

Anakinra (*Kineret*)

Anidulafungin (*Eraxis*)

- May store at RT (up to 77°F [25°C]) for up to 96 hours.

Antivenin, black widow (U.S.)

Antivenin, coral snake (U.S.)

Anti-thymocyte globulin, rabbit (*Thymoglobulin*)

Aprepitant injection (*Emend*)

Arformoterol (*Brovana* [U.S.])

- May store at RT (up to 77°F [25°C]) for up to 6 weeks.

Atezolizumab (*Tecentriq*)

Atracurium besylate

Avelumab (*Bavencio* [U.S.])

Azithromycin ophthalmic (*Azasite* [U.S.])

- Once open, may store at RT (up to 77°F [25°C]) for up to 14 days.

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Aztreonam (*Cayston*)

- After dispensing, may store at RT (up to 77°F [25°C]) for up to 28 days.

Bacitracin powder for injection

Basiliximab (*Simulect*)Becaplermin (*Regranex* [U.S.])Belatacept (*Nulojix* [U.S.])Bendamustine (*Bendeka* [U.S.])

- *Treanda* (Canada) does not require refrigeration.

Benzoyl peroxide/clindamycin gel (*Duac* [U.S.], *Neuac* [U.S.]; *Clindoxyl* [Canada], *Clindoxyl ADV* [Canada])

- After dispensing, store at RT (up to 77°F [25°C]) for up to 60 days.

Benzylpenicilloyl polylysine injection (*Pre-Pen*)

- May store at RT (up to 77°F [25°C]) for up to 24 hours.

Beractant (*Survanta*)Bevacizumab (*Avastin*)Bezlotoxumab (*Zinplava* [U.S.])

Bleomycin injection

Brodalumab (*Siliq* [U.S.])

- May store prefilled syringes at RT (up to 77°F [25°C]) for up to 14 days.

Bupivacaine liposomal (*Exparel* [U.S.])

- May store at RT (up to 77°F [25°C]) for up to 30 days.

Busulfan injection (*Busulfex*)Calcitonin injection (*Miacalcin* [U.S.]; *Calcimar* [Canada])

- May store *Calcimar* at RT (up to 86°F [30°C]) for up to 2 weeks.

Calcitonin nasal spray (generics [U.S.])

- Once open, may store at RT (up to 77°F [25°C]) for up to 30 days (2 mL) or 35 days (3.7 mL).

Canakinumab (*Ilaris*)Carboprost (*Hemabate*)Carfilzomib (*Kyprolis*)Carmustine (*BiCNU*)Certolizumab pegol (*Cimzia*)Cetuximab (*Erbix*)Chlorambucil (*Leukeran*)Ciprofloxacin 6% otic (*Otiprio* [U.S.])Cisatracurium (*Nimbex* [U.S.])

- Use within 21 days of removing from refrigerator, even if re-refrigerated.

Cladribine

Conjugated estrogen injection (*Premarin Intravenous*)Corticotropin (*Acthrel* [U.S.])

Dacarbazine

Daclizumab (*Zinbryta* [U.S.])

- May store at RT (up to 86°F [30°C]) for up to 30 days.

Daptomycin (*Cubicin*)Daratumumab (*Darzalex*)Darbepoetin alfa (*Aranesp*)Desmopressin (*DDAVP Rhinal Tube* [U.S.]; *DDAVP Rhinyle* [Canada])

- May store *DDAVP Rhinal Tube* at RT (up to 77°F [25°C]) for up to 3 weeks.

Desmopressin injection (*DDAVP* [U.S.];*Octostim* [Canada])Digoxin immune Fab (*Digibind* [U.S.];*DigiFab* [Canada])

- May store *Digibind* at RT (up to 86°F [30°C]) for up to 30 days.

Diltiazem injection

- May store at RT for up to 1 month.

Dinoprostone vaginal gel (*Prepidil*, *Prostin E2 Vaginal Gel* [Canada])Dinoprostone (*Prostin E2* tablets [Canada])Dinutuximab (*Unituxin* [U.S.])Dornase alfa (*Pulmozyme*)Doxorubicin (*Adriamycin*)Doxorubicin liposomal (*Doxil* [U.S.], *Lipodox* [U.S.]; *Caelyx* [Canada])Dronabinol capsules (*Marinol* [U.S.])

- May store between temperatures of 46°F and 59°F (8°C and 15°C), if not refrigerated.

Dronabinol solution (*Syndros* [U.S.])

- Once open, may store at RT (up to 77°F [25°C]) for up to 28 days.

Durvalumab (*Imfinzi* [U.S.])Ecallantide (*Kalbitor* [U.S.])

- May store at RT (up to 86°F [30°C]) for up to 14 days.

Echothiophate iodide (U.S.)

Elosulfase alfa (*Vimizim*)Elotuzumab (*Empliciti* [U.S.])Emtricitabine oral solution (*Emtriva* [U.S.])

- May store at RT (up to 77°F [25°C]), with excursions up to 80°F [30°C] for up to 3 months.

Enalapril oral solution (*Epaned* [U.S.])

- May store at RT (up to 77°F [25°C]) for up to 60 days.

Epirubicin (*Ellence*)Epoetin alfa (*Epogen* [U.S.], *Procrit* [U.S.];*Eprex* [Canada])

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Eptifibatide (*Integrilin*)

- May store at RT (up to 77°F [25°C] with excursions to 86°F [30°C]) for up to 2 months.

Estradiol/norethindrone acetate patch (*CombiPatch* [U.S.]; *Estalis* [Canada])

- After dispensing, may store at RT (up to 77°F [25°C]) for up to 6 months.

Estradiol (*Estradot* [Canada])

- May store between 2°C and 30°C (Canadian labeling).

Estramustine (*Emcyt*)

- May store between 2°C and 25°C (Canadian labeling).

Etanercept (*Enbrel*, *Brenzys* [Canada])

- May store at RT (up to 77°F [25°C]) for up to 14 days (U.S. labeling)
- Per Canadian labeling
 - *Enbrel* single-dose prefilled syringes, prefilled *SureClick*, and multi-use vials may be stored up to 27°C for up to 60 days.
 - *Brenzys* may be stored up to 27°C for up to 60 days.
 - Multi-dose vial after reconstitution may be stored at RT (up to 77°F [25°C]) for up to 14 days.

Etonogestrel/ethinyl estradiol vaginal ring (*NuvaRing*)

- After dispensing, may store at RT (up to 77°F [25°C] with excursions up to 86° [30°C]) for up to 4 months.

Etoposide powder for injection (*Etopophos* [U.S.])Evolocumab (*Repatha*)

- May store at RT (up to 77°F [25°C] with excursions up to 86° [30°C]) for up to 30 days.

Exenatide (*Byetta*, *Bydureon*)

- Once open, may store *Bydureon* at RT (up to 77°F [25°C]) for up to 4 weeks.
- Once open, may store *Byetta* at RT (up to 77°F [25°C]) for up to 30 days.

Famotidine injection

Filgrastim (*Neupogen*)

- May store at RT for up to 24 hours (up to 86°F [30°C] for 14 days [Canadian labeling]).

Filgrastim (*Grastofil* [Canada])Filgrastim-sndz (*Zarxio* [U.S.])Formoterol (*Perforomist* [U.S.])

- After dispensing, may store at 36°F to 77°F (2°C to 25°C) for up to 3 months.

Fosphenytoin (*Cerebyx*)

- May store at RT for up to 48 hours.

Gabapentin oral solution (*Neurontin* [U.S.])Galsulfase (*Naglazyme*)Gemtuzumab ozogamicin (*Mylotarg* [U.S.])Glatiramer acetate (*Copaxone*, *Glatopa* [U.S.])

- May store at RT (59°F to 86°F [15°C to 30°C]) for up to 1 month.

Glucarpidase (*Voraxaze* [U.S.])Golimumab (*Simponi*, *Simponi Aria* [U.S.])Granisetron extended-release oral solution (*Sustol* [U.S.])

- May store at RT (up to 77°F [25°C]) for up to 7 days.

Human chorionic gonadotropin (*Ovidrel*)

- After dispensing, may store at RT (up to 77°F [25°C]) for up to 30 days.

Hyaluronate/chondroitin (*DuoVisc* [U.S.])Idarubicin (*Idamycin PFS*)Idarucizumab (*Praxbind*)

- May store at RT (up to 77°F [25°C]) for no more than 48 hours (protected from light) or 6 hours (not protected from light).

Idursulfase (*Elaprase*)Immune Globulin (*GamaSTAN S/D*)Infliximab (*Inflectra*, *Remicade*, *Remsima* [Canada])

- *Remicade* may store for no more than 6 months at RT (up to 86°F [30°C]).

Interferon alfa-2b (*Intron A*)

- May store at RT (up to 77°F [25°C], per Canadian labeling only)
 - Lyophilized powder: up to 4 weeks
 - Ready-to-use solution: up to 7 days
 - Multi-dose pens: up to 48 hours over a four-week period

Interferon beta-1a (*Avonex*)

- May store lyophilized powder at RT (up to 77°F [25°C]) for a total of 30 days (U.S. labeling).
- May store prefilled syringes and pens at RT (up to 77°F [25°C] per U.S. labeling, up to 86° [30°C] per Canadian labeling) for up to 7 days.

Interferon beta-1a (*Plegridy*)

- May store at RT (up to 77°F [25°C]) for up to 30 days.

Interferon beta-1a (*Rebif*)

- May store at RT (up to 77°F [25°C]) for up to 30 days.

Insulin (U.S. subscribers; Canadian subscribers)

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Interferon gamma-1b (*Actimmune* [U.S.])

- May store at RT (up to 77°F [25°C]) for up to 12 hours.

Ipilimumab (*Yervoy*)

Irinotecan liposome (*Onivyde* [U.S.])

Isavuconazonium injection (*Cresemba* [U.S.])

Ixabepilone (*Ixempra* [U.S.])

Ixekizumab (*Taltz*)

Laronidase (*Aldurazyme*)

Latanoprost (*Xalatan*)

- Once open, may store at RT (up to 77°F [25°C]) for up to 6 weeks.

Latanoprost/timolol (*Xalacom* [Canada])

- Once open, may store at RT (up to 77°F [25°C]) for up to 10 weeks.

Liotrix tablets (*Thyrolar* [U.S.])

Lopinavir/ritonavir oral solution (*Kaletra*)

- After dispensing, may store at RT 77°F (25°C) for up to 2 months (U.S. labeling); 42 days (Canadian labeling).

Lorazepam injection

Lorazepam oral concentrate (U.S.)

Lymphocyte immune globulin (*Atgam*)

Melphalan tablets (*Alkeran*)

Methylergonovine injection (U.S.)

Metreleptin (*Myalept* [U.S.])

Mipomersen (*Kynamro* [U.S.])

- May store at RT (up to 86°F [30°C]) for up to 14 days.

Natalizumab (*Tysabri*)

Necitumumab (*Portrazza* [U.S.])

Neomycin/polymyxin B urinary irrigant (*Neosporin G.U.*)

Nivolumab (*Opdivo*)

Nusinersen (*Spinraza* [U.S.])

- May store at RT (up to 86°F [30°C]) for up to 14 days.

Obinutuzumab (*Gazyva*)

Ocrelizumab (*Ocrevus* [U.S.])

Octreotide (*Sandostatin, Sandostatin LAR*)

- May store *Sandostatin* multidose vials at RT (up to 86°F [30°C]) for up to 14 days.
- May store *Sandostatin LAR* at RT for 30 to 60 minutes prior to reconstitution (U.S. labeling) or the day of injection (Canadian labeling).

Ofatumumab (*Arzerra*)

Olaratumab (*Lartruvo* [U.S.])

Omalizumab (*Xolair*)

OnabotulinumtoxinA (*Botox*)

- May store frozen (at or below 23°F [-5°C] per Canadian labeling)

Palifermin (*Kepivance* [U.S.])

Palivizumab (*Synagis*)

Pancuronium

Parathyroid hormone (*Natpara* [U.S.])

Patiromer (*Veltassa* [U.S.])

- May be stored at RT (up to 81°F [27°C]) for up to 3 months.

Pegademase (*Adagen* [U.S.])

Pegfilgrastim (*Neulasta*)

- May store at RT for up to 48 hours (U.S. labeling) or 72 hours (Canadian labeling).

Peginterferon alfa-2a (*Pegasys*)

- May store at RT for up to 24 hours (U.S. labeling).

Peginterferon alfa-2b (*PegIntron* [U.S.])

- Prefilled pens should be refrigerated, vials may be stored at RT.

Peginterferon alfa-2b/ribavirin (*Pegatron* [Canada])

Pegloticase (*Krystexxa* [U.S.])

Pembrolizumab (*Keytruda*)

Penicillin G benzathine (*Bicillin L-A*)

- May store at RT (up to 86°F [30°C]) for up to 7 days (Canadian labeling).

Penicillin G benzathine/penicillin G procaine (*Bicillin C-R* [U.S.])

Pertuzumab (*Perjeta*)

Posaconazole injection (*Noxafil* [U.S.]; *Posanol* [Canada])

Pralatrexate (*Folotyn* [U.S.])

- May store at RT for up to 72 hours.

Pramlintide (*Symlin* [U.S.])

- Once open, may store at RT (up to 86°F [30°C]) for up to 30 days.

Promethazine rectal suppositories (*Promethegan* [U.S.])

Proparacaine ophthalmic solution (U.S.)

Proparacaine/fluorescein (*Flucaeine* [U.S.])

- May store at RT for up to 1 month.

Quinupristin-dalfopristin (*Synercid* [U.S.])

Rabies immune globulin (*HyperRAB S/D, Imogam Rabies*)

Ramucirumab (*Cyramza*)

Ranibizumab (*Lucentis*)

- Prior to use, may store at RT (up to 77°F [25°C]) for up to 24 hours (Canadian labeling only).

Reslizumab (*Cinqair*)

RhoGAM immune globulin (*HyperRHO* [U.S.], *MICRhoGAM* [U.S.]; *RhoGAM* [U.S.]; *WinRho S/D* [Canada])

RimabotulinumtoxinB (*Myobloc* [U.S.])

Risperidone long-acting injection (*Risperdal Consta*)

- May store at RT (up to 77°F (25°C) for up to 7 days.

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Ritonavir capsules (*Norvir* [U.S.])

- After dispensing, may store at RT (up to 77°F [25°C]) for up to 30 days.

Rituximab (*Rituxan*)Rituximab/hyaluronidase (*Rituxan Hycela* [U.S.])Rocuronium (*Zemuron*)

- May store **unopened** at RT (up to 77°F [25°C] for up to 60 days (U.S. labeling) and 86°F (30°C) for up to 90 days (Canadian labeling).
- **Once open**, at RT (up to 77°F [25°C]) must use within 30 days.

Romiplostim (*Nplate*)Sacrosidase (*Sucraid* [U.S.])Sargramostim (*Leukine* [U.S.])Sarilumab (*Kevzara*)Secukinumab (*Cosentyx*)Sinecatechins (*Veregen*)

- After dispensing, patients may store at RT (up to 77°F [25°C]; U.S. labeling).
- May store between 41°F and 77°F (5°C and 25°C; Canadian labeling).

Sirolimus oral solution (*Rapamune*)

- May store open bottles at RT (up to 77°F [25°C]) for up to 15 days (U.S. labeling).
- May store open bottles at RT (up to 86°F [30°C]) for up to 5 days (Canadian labeling).

Somatropin (*Humatrope*, *Nutropin AQ*, *Omnitrope*)Somatropin (*Norditropin*)

- Once open, may store at RT (up to 77°F [25°C]) for up to 3 weeks.

Somatropin (*Saizen*)

- The 3.33 mg vials should be stored in the refrigerator, but the 5 mg vials should be stored at RT (Canadian labeling).
- All autoinjector cartridge strengths should be stored in the refrigerator (Canadian labeling).
- All strengths may be stored at RT (up to 86°F [30°C]; U.S. labeling).

Somatropin (*Genotropin*)

- May store *Genotropin GoQuick* at RT (up to 77°F [25°C]) for up to 4 weeks (Canadian labeling).
- May store *Genotropin MiniQuick* at RT (up to 77°F [25°C]) for up to 3 months (U.S. labeling) and 6 months (Canadian labeling).

Streptozocin (*Zanosar*)Succinylcholine (*Quelicin*)

- May store at RT for up to 14 days.

Tafluprost (*Zioptan* [U.S.])

- May store at RT (up to 77°F [25°C]) for up to 30 days.

Taliglucerase alfa (*Elelyso*)Telavancin (*Vibativ*)

- Excursions up to 77°F (25°C) are acceptable, but no time limit given, (U.S. labeling).

Temozolomide injection (*Temodar* [U.S.])Temsirolimus (*Torisel*)Teniposide (*Vumon*)

- May store at RT and does not require refrigeration (Canadian labeling).

Teriparatide (*Forteo*)Thiotepa (*Tepadina* [U.S.])Tipranavir capsules (*Aptivus*)

- Once opened, may store at RT (77°F [25°C] with excursions up to 86°F [30°C]) for up to 60 days.

Tobramycin inhalation solution (*Bethkis* [U.S.]; *Tobi*)

- May store in opened or unopened foil pouches at RT (up to 77°F [25°C]) for up to 28 days.

Tocilizumab (*Actemra*)Topotecan capsules (*Hycamtin* [U.S.])Trametinib (*Mekinist*)

- Once open, may store at RT (up to 86°F [30°C]) for up to 30 days (Canadian labeling)

Trastuzumab (*Herceptin*)Trastuzumab emtansine (*Kadcyla* [Canada])Trifluridine (*Viroptic*)Ustekinumab (*Stelara*)Valrubicin (*Valstar* [U.S.]; *Valtaxin* [Canada])

- Vaccines (most)
- Some may require storage in the freezer. For more information and specifics, see our toolbox, *Medication Storage: Maintaining the Cold Chain*, and product labeling.

Vedolizumab (*Entyvio*)Velaglucerase alfa (*Vpriv*)

Vinblastine injection

Vinorelbine (*Navelbine*)

- May store at RT (up to 77°F (25°C) for up to 72 hours (U.S. labeling).

Vitamin A palmitate injection (*Aquasol A* [U.S.])Ziv-aflibercept (*Zaltrap* [U.S.])

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Users of this resource are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.

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